

VIDEO

FAQ

Q What's the point of having three CCDs in a video camera?

A A camcorder with a single charge-coupled device (CCD) sensor can't deliver its full resolution in full colour. Instead, a subset of the pixels are devoted to the red, green and blue components by using filters. Camcorders with three CCDs go one better by devoting one CCD each to red, green and blue. The three images are combined into a single colour image, which is what you see. The result is a full-resolution image with high colour depth and less noise, so you get better image quality.

Until recently, three-CCD cameras were much more expensive than single-CCD models, but you can now find them for less than £500.

Seth Barton

Notebooks and video expert



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HUMAX Duovisio PVR-9200T

★★★★★

£207 inc VAT

While England fans were celebrating their team's 2-1 victory over Uruguay, the *Shopper* team were commiserating an undeserved draw. The error was due to Humax's Duovisio PVR-9200T, which had finished recording the match at the scheduled time, thereby missing the all-important winning goal. But excepting this one error, it's a great device that will dramatically improve your Freeview TV viewing.

Its silver casing is tasteful and should fit in well beneath your television. The rear has all the connections you'd expect from a decent Freeview box, including twin SCART sockets. It also has composite video and stereo phono outputs and an optical S/PDIF output with support for Dolby Digital. The front of the unit opens to reveal a USB connector and Common Interface slot, so you can upgrade the player to receive pay TV channels such as Top Up TV.

Inside is a 160GB hard disk, which provides storage for around 100 hours of recording. Twin tuners are provided so you can record one programme while watching another, or record two programmes at once. You can even watch a third programme while recording two others, as long as it's on the same digital multiplex of channels.

Scheduling recordings is simple. Just browse the well-laid out EPG to find the programme you want and then press a single button to schedule it. Unfortunately, there's no easy way of adding a few minutes to the end of a recording in case your programme overruns. You can do this in manual scheduling, but it then removes the scheduling icon from the EPG, which causes confusion. This is a minor oversight in an otherwise

SUMMARY

- ✓ Twin digital tuner
- ✓ Easy-to-use interface
- ✗ Minor scheduling issues

HARD DISK RECORDER 2x digital tuners, 160GB hard disk, RF input, 2x SCART, RF, composite, stereo phono, optical S/PDIF output, USB
PART CODE PVR-9200T
SUPPLIER www.superfi.co.uk
DETAILS www.humaxdigital.com/uk



excellent interface. It's also a shame that you can't set the PVR-9200T to record an entire series, as you can with Sky+ and Media Center.

Pausing and rewinding live TV is well implemented, and the large remote is clearly laid out and labelled. Picture quality is high throughout, and recordings look identical to live TV. There's also a flexible picture-in-picture function, so you can keep an eye on the news or sport while watching your favourite show, though this doesn't work while watching recordings.

A USB port provides a limited connection to a PC, enabling you to transfer JPEG and MP3 files to the device's hard disk. However, its photo and audio interfaces are limited and make this little more than a gimmick. More useful is the ability to copy video from the Humax to your PC. The format is unusual, though, and you'll have to use a program such as VideoReDo,

from www.videoredo.com, before you can play them on media players and other devices.

The Duovisio PVR-9200T is an excellent product that makes TV viewing more flexible. It is worth remembering, though, that most PCs contain a lot of this hardware already and that adding an inexpensive TV card may prove just as effective.

Seth Barton

Also consider...

TERRATEC Cinergy hybrid T USB XS

★★★★★

£67 inc VAT

PRICE CUT!



Terratec's USB stick receives both analogue and digital TV broadcasts. It also has a breakout lead with a range of audio and video inputs.

It comes with the excellent PowerCinema 4 software. This gives you a Sky+ style fullscreen EPG, as well as media file and DVD playback. The remote is well designed and the buttons clearly labelled.

This tiny TV tuner has all the features you could ever want. Picture quality is good and the software is the best we've seen. You can buy cheaper USB TV sticks, but this is the best.

USB TV STICK RF, line in, composite and S-video inputs, MPEG2 capture format, USB Hi-Speed interface PART CODE E3318
SUPPLIER www.savastore.com 0871 666 1616 DETAILS www.terratec.net ✓ Receives digital and analogue TV ✗ Not the cheapest available FULL REVIEW Dec 2005

PANASONIC NV-GS17B

★★★★★

£182 inc VAT

PRICE CUT!



Panasonic's NV-GS17B was the cheapest

camcorder in our recent Labs (*Shopper* April 2006).

Despite this it produced some very respectable video in our tests. It captured decent detail and realistic colour, all without excessive noise. A big 24x optical zoom is handy for distant subjects, but it lacks a light to record in low light.

The menu system is easy to use with the small joystick. There's an S-video output, so you can play back video on your TV. At this price it's a real bargain, and a great first camera.

MINIDV CAMERA 24x optical zoom, 0.8-megapixel CCD, 2.5" LCD screen, FireWire and USB interfaces, weight 410g, battery life 106 minutes PART CODE NV-GS17B SUPPLIER www.pixmania.co.uk DETAILS www.panasonic.co.uk ✓ Great video quality for the price ✗ No FireWire or video inputs FULL REVIEW Apr 2006

PANASONIC NV-GS300

★★★★

£546 inc VAT

Panasonic's NV-GS300 is very similar to its NV-GS150, which won a Best Buy award in our DV cameras Labs in *Shopper* April 2006.

The NV-GS300 is comfortable to hold unless you have large hands, in which case the natural position leaves your forefinger sitting uncomfortably on a protrusion for the main control dial. We've been impressed by the dial and mini joystick control system on previous models. The dial selects recording and playback modes, while the joystick controls a two-tier menu system. In recording mode, you simply press the stick in to access a range of shooting presets. Alternatively, press the Menu button to bring up more detailed options. There's a wide range of manual controls, including shutter speed and aperture adjustments. However, a manual focus ring would have been a nice addition.

The widescreen LCD produces sharp and colourful images. Beneath the LCD are the USB and FireWire ports, with support for input as well as output. The viewfinder is also good, although it uses a standard 4:3 ratio and is letterboxed for widescreen. It extends far enough to get past the battery, though, so you can get your face to it unimpeded. Battery life is very good, so you shouldn't get caught short at a crucial moment.

The picture quality exceeds that of even our recent Labs winner. It has the same array of three 800,000-pixel CCDs, but Panasonic has managed to coax a brighter and more colourful picture



from them. Unless you are looking for the most realistic colour reproduction possible, you will find that the subtle tonal enhancement creates very pleasing results. Image noise is kept to a minimum in most lighting conditions and performance in low light is also good.

The large lens has an automated cover built in, which is ideal for the lazy, absent-minded or accident-prone user. A 10x optical zoom is sufficient for most, and an optical stabilisation system is provided. This gives steadier pictures than an electronic system and doesn't sacrifice picture detail from the CCD. Widescreen mode is a bit of a disappointment, as the image is heavily cropped to fit the 16:9 aspect ratio. This is a common issue though, and is seen on camcorders from all manufacturers.

The NV-GS300 is well designed and shoots colourful video. The only problem is the price; the NV-GS180 is similarly specified and costs less than £400, which means you are paying over £150 for optical stabilisation, FireWire input and an automated lens cap. We're not convinced the extra cost is worth it.

Seth Barton

SUMMARY

- ✓ Sharp, colourful video
- ✓ Optical image stabilisation
- ✗ No manual focus ring

DV CAMERA MiniDV storage, 3x 1/4" CCD sensors, 10x optical zoom, USB2 and FireWire interfaces, S-video and composite output
 PART CODE NVGS300
 SUPPLIER www.bestcameras.co.uk
 DETAILS www.panasonic.co.uk

PERFORMANCE (see page 60)



CHOOSING A... TV Card

Follow the steps to find your ideal specs

INTERFACE: PCI
 TUNESTO: Analogue
 INPUTS: Radio frequency (RF)
 CAPTURE FORMAT: N/A
 HARDWARE COMPRESSION: No
 Recommended minimum in grey

1 TV cards connect to PCs through a variety of interfaces. Internal cards fit into PCI or PCI-E x1 slots. Some double as graphics cards and use an AGP or PCI-E x16 slot. External devices with USB interfaces are easier to install but use up a USB port. USB stick and PC Card versions are also available, and are ideal for notebooks.

2 Most devices tune to either analogue or digital TV broadcasts from an external aerial, but hybrid devices can receive both types of broadcast. Terrestrial digital TV, or Freeview as it's commonly known in the UK, provides extra free channels, but you can't access subscription channels with a PC TV card. Analogue broadcasts can give a superior picture to digital broadcasts, but digital tuners don't suffer from noise and ghosting when the reception is poor – although they may cut out altogether. Check the digital reception in your area by going to www.freeview.co.uk and entering your postcode.

3 Basic devices provide an RF input for connecting an aerial. To connect an analogue video device, such as a camcorder or VCR for video editing, look for a composite or, preferably, S-video input. Digital tuners tend not to include this feature. Buy a hybrid device if you want to receive digital TV and capture analogue video.

4 If you want to use your PC for video editing or as a digital video recorder, you'll need to capture video in an appropriate compression format. The most practical format is MPEG2, which gives excellent quality and reasonable file sizes.

A PC with a 1GHz or faster processor can compress video to MPEG2 format in software, while slower machines need hardware compression on the card. Digital TV is broadcast in MPEG2 format, which makes recording to disk easy. Expect an hour of MPEG2 video to take up roughly 1.5GB of hard disk space.

5 Factor in any extras you want, such as an FM radio, a remote control and software for scheduled recordings and pausing live TV.

FREECOM DVB-T USB STICK

★★★★★

£36 inc VAT

This is the smallest digital TV tuner we've ever seen. It plugs into any USB2 port and is incredibly easy to install. The software's interface isn't brilliant, but it's good enough for watching or recording the odd programme. The EPG is poorly designed and this device will not suffice as a full time PVR.

For notebook users who want to watch the occasional programme, it's ideal. It is cheap and the picture quality is good; however, you may need a rooftop aerial, depending on the level of DVB reception in your area.



TV TUNER RF input, MPEG2 capture format, USB2 interface PART CODE 441CDF DVB-T-USB SUPPLIER www.microwarehouse.co.uk DETAILS www.freecom.com
 Compact and reasonably priced Digital TV only; fiddly interface with poor EPG FULL REVIEW Dec 2004

PINNACLE ShowCenter 200

★★★★★

£153 inc VAT

The ShowCenter 200 streams media files from your PC to your living room using Microsoft's Windows Media Connect. It supports all the most common photo, audio and video file types and is easy to install. Its wired and wireless connections mean it'll fit into any home network. Best media player on the market.



STREAMING MEDIA PLAYER Requires 1.5GHz PC with Windows XP SP1 and 256MB RAM; SCART, component, composite and S-video outputs, two stereo phono, optical and coaxial S/PDIF audio outputs, USB, 100Mbit/s network, wireless 802.11g SUPPLIER www.dabs.com DETAILS www.dabs.com Wide file support Clunky interface FULL REVIEW Dec 2005